

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Title: "FORM-CORRECTING SHOES"

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Art Unit 3728

Sir:

The claims have been amended. The mistake in the phrase "not fall no the toes as he is..." has been corrected to "not fall on the toes as he is..." in new claims 5, 6, 7 and 8. The words "one step" have been added to the former phrase "characterized by having the heel and sole parts of the shoe sole are at the same height and significantly higher than the toe part" between "and" and "significantly". And to make the purpose of the invention clear, the phrase "and, when he walks or runs the body weight automatically does not fall on the toes as he walks or runs on his bare feet with the toe intentionally and completely lifted up" is added in claim 5 (new). The phrase "and, the body weight automatically does not fall on the toes when he walks and runs" is added in claims 6, 7 and 8 (new).

I, the applicant, consider that my invention is now patentable under these new claims according to the following reasons.

1. The purpose of "FORM-CORRECTING SHOES" is to let the person who wear them having the condition that the body weight automatically does not fall on the toes when he stands straight, walks or runs, like he stands straight, walks or runs on his bare feet with his toes intentionally and completely lifted up. That is, the person who wears "FORM-CORRECTING SHOES" need not to intentionally lift his toes

and the toes are not used during walking and running. With the body weight not fall on the toes, and with the soles and heels of the feet are at the same height, one automatically obtain the condition, suitable for playing sports, that all skeletal muscles are in equally alert, the backbone is fixed to the pelvis, and the upper arms are fixed to the shoulders.

2. Shoe in Figure 7 of Allen 5,940,994 has a shoe sole, of which the toe part and the sole part are lower than the heel part. These structures are similar to those of common shoes. Although, the base surface of the toe part is curved up from the ground, these structures do not prevent the body weight from falling on the toes while standing straight, walking or running. One can easily prove this by wearing shoes with similar structures with his toes touching to the shoe sole. He should feel some parts of his body weight on his toes while standing, walking and running. And, only having the base surface of the toe part of the shoe sole being curved up is not enough to prevent body weight from falling on the toes. This can be tested by the following method. Lay a flat wood plate on a step of a staircase. The plate is wider than the step. Stand by bare feet on the plate with only the heel and sole portions over the step, and with the toes on the plate but out of the width of the step. With the toes touching to the plate, one can still feel some part of body weight on the toes. From this fact, it becomes clear that shoes described in Figures 2, 4, 7, 10 and 12 of Allen '994 cannot prevent body weight from falling on the toes while standing, walking and running. Shoes in Figures 10 and 12 of Allen '994 have the toe part of the shoe sole higher than the sole and heel parts. Having the toes being passively lifted up does not prevent body weight from falling on the toes and does not provide a body condition that all skeletal muscles are in equally alert, the backbone is fixed to the pelvis, and the upper arms are fixed to the shoulders. This can be tested by standing on bare feet on a flat ground with only the sole and heel parts on the ground but the toes on a few-mm-thick carpet. And, it is not difficult to image that, wearing shoes in Figures 10 and 12 of Allen '994, the body weigh will fall on the toes during walking and running.

In Allen '994, the methods of *evenly* distributing the wearer's weight to alleviate pain or discomfort in the ball region, as well as in other regions

of the foot are described, but the methods to and why it is useful to prevent the body weight from falling on the toes while standing, walking and running are not mentioned.

3. The sandal of Melcher WO 87/06801 seems to have the same structures as shoes in accordance with my claim 7 (new). But there are some substantial differences between them.

The purpose of WO '801 is described in the underlined phrase of the following sentence (WO '801, page 3, lines 7-12), which can be translated to English as "by this design, one who wears the sandal is allowed to have the weight distribution, and, the walking and running motion as natural as walking and running on bare feet".

Der Erfindung liegt daher die Aufgabe zugrunde, eine Sandale zu schaffen, bei welcher die Belastungsverhältnisse des Fußes und der Bewegungsablauf beim Gehen möglichst weitgehend den natürlichen Verhältnissen beim Barfußgehen entsprechen, also insbesondere die natürliche Kippbewegung des Fußes über den Ballen möglichst wenig beeinträchtigt wird.

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In standing, walking or running naturally on bare feet, there usually are some moments that the body weight falls on the toes. And, just standing straight on a flat ground on bare feet with the toes touching to the ground and twisting the body, one will find that the upper arms are not locked to the shoulders.

As seen in Figure 2 of WO '801, in order to increase the flexibility of the front fraction (10) of the sandal sole, cut lines (13) have to be provided (WO '801, page 6, lines 4-18). From this fact, one can say that the sole of the sandal of WO '801 has to be flat and thin in order to be flexible (see Figures 1 and 3 of WO '801). The thicker the sandal sole is the less flexible it will be. Although there is no sole under the toes, but since the sole of the sandal of Melcher WO 87/06801 is so thin the body weight is not automatically prevented from falling on the toes. For me, the applicant, whose shoe size is 26 cm, in order not to let the body weight

fall on the toes while walking and running, the shoe sole of the form-correcting shoes in claim 7 (new) should have more than 20 mm in thickness.

As been described above, the purpose of my invention "FORM-CORRECTING SHOES" is to let the person who wear them having the condition that the body weight automatically does not fall on the toes when he stands straight or walks or runs, like he stands straight, walks or runs on his bare feet with the toes intentionally and completely lifted up. It is not natural to stand straight, walk or run on bare feet with the toes intentionally and completely lifted up.

Another significant difference between WO '801 and my invention is that the wearer's heel and sole are not at the same height wearing the sandal of WO '801, while wearing my form-correcting shoes they are at the same height. From Figure 1 of WO '801 and from page 5, lines 13-23, one can see that the shoe sole under the ball of the foot, i.e., the sole of the foot, is designed to be thinner than other part of the sandal. In Figure 3 of WO '801, the upper sandal sole under the wearer's sole (10A) is designed to be longer the lower one (10B). Since these sandal soles are flat (thin) and flexible, it is not sure that the wearer's sole and heel will be at the same height by this structure.

For my invention, form-correcting shoes, to have the wearer' soles and heels are at the same height, together with having the body weight not fall on the toes, are the most important characteristics. This is because the wearer cannot automatically obtain the condition, suitable for playing sports, that all skeletal muscles are in equally alert, the backbone is fixed to the pelvis, and the upper arms are fixed to the shoulders, if there is even a very little difference (say 0.5 mm for shoes sized 26 cm) in height between the wearer's soles and heels.

4. Concerning claim 8 (new), although changing the shoe sole structure by using the inner sole is not a new technique, however, if claim 5 and 6 (new) are patentable claim 8 should be also patentable.